

Applicants : Robert L. Bingle, Joseph Camilleri, Peter J. Whitehead and Kenneth Schofield
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Remarks:

The amendments and remarks presented herein are believed to be fully responsive to the Office Action dated July 16, 2009.

Claims 1, 5-9, 12, 15, 16, 31, 34-37, 40, 41 and 47-49 are pending in the application. Claims 2-4, 10, 11, 13, 14, 17-30, 32, 38, 39, 42-46 and 50-65 have been canceled without prejudice and claims 1, 6-9, 15, 16, 31 and 49 have been amended as set forth above. The specification has been amended to update several incorporated patent applications that have now issued as patents. The amendments are fully supported in the specification and drawings as originally filed. No new matter has been added.

ALLOWABLE CLAIMS

Claims 16 and 49 were indicated as being directed toward allowable subject matter and as being allowable if rewritten in independent form. Applicants have amended claims 16 and 49 to be in independent form, such that claims 16 and 49 are now in condition for allowance.

CLAIM REJECTIONS

Claims 1, 4 and 5 were rejected under 35 U.S.C. §102(b) as being anticipated by Pastrick et al., U.S. Pat. No. 6,276,821. Claims 6-8, 31, 35, 47 and 48 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pastrick et al., in view of Kallhammer et al., U.S. Pat. Publication No. 2008/0043105, while claims 9 and 36-41 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pastrick et al., in view of Kallhammer et al., and in further view of Strumolo et al., U.S. Pat. No. 6,535,242, and claims 12 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pastrick et al., in view of Strumolo et al., and claim 34 was

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rejected under 35 U.S.C. §103(a) as being unpatentable over Pastrick et al., in view of Kallhammer et al., and further in view of Schofield et al., U.S. Pat. No. 6,690,268.

Applicants respectfully traverse the rejections under 35 U.S.C. §102 and §103. However, and without acquiescing in the rejections in any manner and solely to expedite prosecution and allowance of the claims, Applicants have clarified independent claims 1 and 31 and submit that the present claims are in condition for allowance for at least the reasons set forth below.

Applicants have amended independent claim 1 to clarify that the camera module comprises a plastic housing and an imaging sensor having a lens and a pixelated imaging array. The camera module comprises a self-contained camera module with the imaging sensor and associated components substantially sealed within the plastic housing. The camera module is configured to be positioned at the vehicle as a unit. The camera module comprises an electrical connector that is electrically connected to a vehicle electrical connector when the camera module is positioned at the vehicle. The first portion of the camera module comprises a connector portion and includes the electrical connector at an end thereof and the second portion of the camera module comprises a camera portion and includes a transparent cover portion at or near an end of the lens for receiving an image therethrough. The control is operable to process video images captured by the imaging sensor.

With respect to the rejection of independent claim 1, Applicants submit that Pastrick et al. does not disclose, suggest or anticipate or render obvious the presently claimed invention. Pastrick et al. discloses an exterior mirror with a signal light module. There is no disclosure or suggestion in Pastrick et al. of a camera module, particularly a camera module as claimed herein, which comprises a plastic housing and an imaging sensor having a lens and a pixelated imaging array, and which comprises a self-contained camera module with the imaging sensor and associated components substantially sealed within the plastic housing, and which is configured to be positioned at the vehicle as a unit, and which comprises an electrical connector that is

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electrically connected to a vehicle electrical connector when the camera module is positioned at the vehicle, and wherein a first portion of the camera module comprises a connector portion and includes the electrical connector at an end thereof and a second portion of the camera module comprises a camera portion and includes a transparent cover portion at or near an end of the lens for receiving an image therethrough, and wherein a control is operable to process video images captured by the imaging sensor of the camera module, as is claimed in independent claim 1.

To the contrary, Pastrick et al. discloses an exterior mirror with a signal light module. Pastrick et al. discloses that the signal light module may include one or more cameras. However, there is no disclosure or suggestion in Pastrick et al. of a camera module as claimed herein. The presently claimed invention of independent claim 1 encompasses a self-contained camera module that is positioned at the vehicle as a unit and that has an imaging sensor having a lens and a pixelated imaging array and associated components substantially sealed within a plastic housing, with the plastic housing having a connector portion and a camera portion that includes a transparent cover portion. The self-contained camera module of the presently claimed invention of claim 1 also includes an electrical connector that is electrically connected to a vehicle electrical connector when the camera module is positioned at the vehicle. Such a self-contained camera module is clearly not disclosed or suggested in Pastrick et al.

The Office Action, at page 3, cites to Figures 43-44 and column 27, lines 38-48 in asserting that Pastrick et al. discloses a second portion that comprises a camera portion and that includes a transparent cover portion for receiving an image therethrough. Applicants respectfully traverse. Pastrick et al., at column 27, lines 38-48 merely states that the signal light is disposed behind the reflective element of the exterior mirror and that the *reflective element* may have a transparent portion. Pastrick et al. does not disclose or suggest a self-contained camera module that has an imaging sensor and associated components substantially sealed within a plastic housing, wherein a first portion of the camera module comprises a connector portion and includes the electrical connector at an end thereof and a second portion of the camera module

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comprises a camera portion and includes a transparent cover portion at or near an end of the lens for receiving an image therethrough. To the contrary, Pastrick et al. merely discloses a transparent portion of a reflective element, which clearly is not part of a self-contained camera module as claimed in independent claim 1.

Thus, Applicants submit that Pastrick et al. does not disclose, suggest or anticipate or render obvious the imaging system of the present invention, particularly as set forth in independent claim 1. With respect to the rejection of dependent claims 5-9, 12 and 15, Applicants submit that Pastrick et al., either alone or in combination with Kallhammer et al. and/or Strumolo et al., does not disclose, suggest or anticipate or render obvious the imaging system of the present invention, particularly as set forth in these claims, for at least the reasons set forth above. Reconsideration and withdrawal of the rejection of claims 1, 5-9, 12 and 15 is respectfully requested.

With respect to the rejection of independent claim 31, Applicants have amended independent claim 31 to clarify that the panel cleaning device comprises a wiper element positionable at the exterior portion of the vehicle and configured to engage an exterior surface of the transparent panel to clean the transparent panel as the housing moves the imaging device between the stored position and the operational position. Kallhammer et al. does not disclose or suggest such an imaging system and panel cleaning device. To the contrary, Kallhammer et al. merely states (at paragraph [0062]) that "the driver may have a control which can be actuated to cause the camera to move from the operative position to the retracted position, and back again, so that the driver may effect a cleaning of the lens of the camera." There is no disclosure or suggestion of a wiper element that engages the exterior surface of the transparent panel to clean the transparent panel as the housing moves the imaging device between a stored position and an operational position.

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Thus, Applicants submit that the combination of Pastrick et al. and Kallhammer et al. does not disclose, suggest or render obvious the imaging system of the present invention, particularly as set forth in independent claim 31. With respect to the rejection of dependent claims 34-37, 40, 41, 47 and 48, Applicants submit that the combination of Pastrick et al., either alone or in combination with Kallhammer et al. and/or Strumolo et al. and/or Schofield et al., does not disclose, suggest or render obvious the imaging system of the present invention, particularly as set forth in these claims, for at least the reasons set forth above. Reconsideration and withdrawal of the rejection of claims 31, 34-37, 40, 41, 47 and 48 is respectfully requested.

Accordingly, Applicants respectfully submit that Pastrick et al., either alone or in combination with any other prior art of record, does not disclose, teach, suggest, anticipate or render obvious the imaging system of the present invention, particularly as set forth in independent claims 1 and 31 and in the claims depending therefrom. Thus, Applicants respectfully submit that Pastrick et al., either alone or in combination with any other prior art reference of record, does not disclose or suggest or render obvious to one of ordinary skill in the art the combination of features that collectively and combined together constitute the claimed subject matter of the imaging systems as set forth in claims 1, 5-9, 12, 15, 31, 34-37, 40, 41, 47 and 48. Reconsideration and withdrawal of the rejections of claims 1, 5-9, 12, 15, 31, 34-37, 40, 41, 47 and 48 is respectfully requested.

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Claims 1, 5-9, 12, 15, 16, 31, 34-37, 40, 41 and 47-49 are pending in the application. Applicants respectfully submit that claims 1, 5-9, 12, 15, 16, 31, 34-37, 40, 41 and 47-49 are in condition for allowance and a notice to that effect is earnestly and respectfully requested.

Respectfully submitted,

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